

OIB Summer 2019 - Gulfstream V - JSC 09/12/19 Science Report

Aircraft: [Gulfstream V - JSC](#) ([See full schedule](#))

Date: Thursday, September 12, 2019

Mission: OIB Summer 2019

Mission Location: Thule Greenland

Mission Summary:

[operational_instruments]
ATM
Narrow Swath ATM
FLIR
CAMBOT
Snow Radar
[/operational_instruments]

OUTLOOK FOR TOMORROW: Based on the forecasts this morning, there is a potential for a medium-priority sea ice mission, however we need to monitor the conditions in the Arctic Ocean throughout the day. Northeast Greenland is still out of the question for tomorrow due to low cloud coverage there from a low pressure system off of the coast.

Mission: K-EGIG-Summit

Priority: High

The K-EGIG-Summit high-priority land ice mission has been modified from its original version due to the fact that we are only basing out of Thule Greenland this campaign when normally this mission is flown from Kangerlussuaq Greenland. Flying this mission from Thule means we needed to remove the K-transect in the Russell glacier catchment and the EGIG traverse line which ESA's CryoVex sampled in Spring 2019. We also needed to remove one ICESat-2 ground track: C0795. Unlike with other aircraft used by OIB, the G-V has the range for us to be able to fly important parts of this mission like 4 IS-2 ground tracks around Summit Station. This is of particular importance because at this highest elevation of the ice sheet elevation change, accumulation and melt are not occurring as fast as in other areas of the ice sheet, making it an idea location to validate the elevation accuracy of IS-2 with ATM and ground measurements undertaken by scientists at Summit along portions of these ground tracks.

Just like we saw this morning on the satellite imagery, the majority of our flight had clear skies, allowing for optimal data collection. We did encounter some low clouds just on the northern most part of our tracks near Summit station and a little haze. Also during this mission we passed by Summit station three times on different IS-2 ground tracks. Lots of snow dunes and sastrugi were present on the ice.

All Instruments performed without any issues today. Nearly 100% data collection.

ICESat-2 RGT latencies (+/- indicates OIB surveyed after/before ICESat-2):

C0879 (+19)

C0437 (-43)

C0749 (+17)

C0246 (-31)

Data volumes collected during today's mission, which consisted of 4.3 hours of data collection:

ATM: 71 Gb

CAMBOT: 87 Gb

FLIR: 9 Gb

Narrow Swath ATM: 96 Gb green

Narrow Swath ATM: 85 Gb IR

VNIR: 35 Gb

SWIR: 51 Gb

Snow Radar: 0.88 Tb

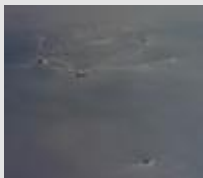
Images:

Figure 1



[Read more](#)

Figure 2



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Figure 3



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Figure 4



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Submitted by: Linette Boisvert on 09/16/19

Related Flight Report:

Gulfstream V - JSC 09/12/19

Flight Number: GV-44
Payload Configuration: OIB
Nav Data Collected: No
Total Flight Time: 7.1 hours
Submitted by: Debra Willett on 09/12/19
Flight Segments:

From:	BGTL	To:	BGTL
Start:	09/12/19 10:52 Z	Finish:	09/12/19 17:55 Z
Flight Time:	7.1 hours		
Log Number:	195004	PI:	Joseph MacGregor
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Miles Flown:	3100 miles		

Flight Hour Summary:


	195004
Flight Hours Approved in SOFRS	120
Total Used	83.8
Total Remaining	36.2

195004 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
08/19/19	GV-34	Science	3.8	3.8	116.2	1700
08/21/19	GV-35	Transit	0.6	4.4	115.6	300
09/03/19	GV-36	Transit	6.5	10.9	109.1	2800
09/04/19	GV-37	Science	6.7	17.6	102.4	2900
09/05/19	GV-38	Science	6.7	24.3	95.7	2900
09/06/19	GV-39	Science	6.6	30.9	89.1	2900
09/07/19	GV-40	Science	6.1	37	83	2700
09/09/19	GV-41	Science	6.4	43.4	76.6	2800
09/10/19	GV-42	Science	6.8	50.2	69.8	3000
09/11/19	GV-43	Science	6.9	57.1	62.9	3000
09/12/19	GV-44	Science	7.1	64.2	55.8	3100
09/13/19	GV-45	Science	5.8	70	50	2500
09/14/19	GV-46	Science	7.2	77.2	42.8	3100
09/15/19	GV-47	Transit	6.6	83.8	36.2	2900

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Flight Tracks:

Attachment	Size
 kegigsummit_labels.kml	21.64 KB

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NASA Official: Bruce A. Tagg

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